

UNITED STATES DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R036XB117NM

Site Name: Cinder

Precipitation or Climate Zone: 10-16"

Phase: \_\_\_\_\_

## PHYSIOGRAPHIC FEATURES

### Narrative:

This site is on nearly level to moderately sloping or rolling uplands found near cones or craters. Slopes average 10 percent or less and do not ordinarily exceed 15 percent. Elevations vary from about 6,000 to 7,800 feet.

### Land Form:

1. Cinder cone

2.

3.

### Aspect:

1. not significant

2.

3.

	Minimum	Maximum
Elevation (feet)	6000	7800
Slope (percent)	0	15
Water Table Depth (inches)	--	--
Flooding:	Minimum	Maximum
Frequency	--	--
Duration	--	--
Ponding:	Minimum	Maximum
Depth (inches)	--	--
Frequency	-	--
Duration	--	--

### Runoff Class:

Not available

## CLIMATIC FEATURES

### Narrative:

Average annual precipitation varies from about 10 inches to just over 16 inches. Fluctuations ranging from about 5 inches to 25 inches are not uncommon. The overall climate is characterized by cold dry winters in which winter moisture is less than summer. As much as half or more of the annual precipitation can be expected to come during the period of July through September. Thus, fall conditions are often more favorable for good growth of cool-season perennial grasses, shrubs, and forbs than are those of spring.

The average frost-free season is about 120 days and extends from approximately mid-May to early or mid-September. Average annual air temperatures are 50 degrees F or lower and summer maximums rarely exceed 100 degrees F. Winter minimums typically approach or go below zero. Monthly mean temperatures exceed 70 degrees F for the period of July and August.

Rainfall patterns generally favor warm-season perennial vegetation, while the temperature regime tends to favor cool-season vegetation. This creates a somewhat complex community of plants on a given range site which is quite susceptible to disturbance and is at or near its productive potential only when both natural warm- and cool- season dominants are present.

	Minimum	Maximum
Frost-free period (days):	51	171
Freeze-free period (days):	130	252
Mean annual precipitation (inches):	10	16

### Monthly moisture (inches) and temperature (<sup>0</sup>F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.40	.91	12.9	47.0
February	.43	.65	16.6	51.2
March	.47	1.10	20.9	57.1
April	.30	.49	26.1	65.3
May	.46	.98	33.4	74.2
June	.51	.57	41.4	84.2
July	2.15	3.45	50.4	85.1
August	2.28	3.03	48.7	82.4
September	1.29	1.68	41.4	77.9
October	.81	1.12	29.4	69.2
November	.38	.71	19.1	57.3
December	.53	.95	13.1	48.9

Climate Stations:

Station ID		Location		Period	
				From:	To
290640		Augustine2E		05/01/ 26	07/31/ 00
					:
296812		Pietown 19NE		09/01/ 88	07/31/ 00
					:
Station ID		Location		Period	
				From:	To
297180		Quemado		08/01/ 15	07/31/ 00
					:
					Period

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by water from wetlands or streams.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

## REPRESENTATIVE SOIL FEATURES

### Narrative:

These soils are derived from volcanic cinders. Typically, they have gravelly or very gravelly loam surfaces, but these may also be gravelly or very gravelly sandy loams or sandy clay loams. They are moderately deep to deep and are well drained. The subsoils are usually gravelly or very gravelly throughout. Permeability is moderately rapid, and the available water capacity is low to moderate.

Parent Material Kind: Volcanic ash

Parent Material Origin: Volcanic breccia - unspecified

### Surface Texture:

1. gravelly
2. very gravelly loam
3. gravelly sandy loams, sandy clay loams

### Surface Texture Modifier:

1. N/A
2.
3.

Subsurface Texture Group: Gravelly or very gravelly

Surface Fragments  $\leq 3''$  (% Volume): --

Surface Fragments  $> 3''$  (% Volume): --

Subsurface Fragments  $\leq 3''$  (%Volume): 5-56%

Subsurface Fragments  $\geq 3''$  (%Volume): --

Drainage Class:	Minimum	Maximum Somewhat excessively
Permeability Class:	<u>Moderately slow</u>	<u>Moderately rapid</u>
Depth (inches):	<u>0</u>	<u>60</u>
Electrical Conductivity (mmhos/cm):	<u>0</u>	<u>2.0</u>
Sodium Absorption Ratio:	<u>--</u>	<u>--</u>
Soil Reaction (1:1 Water):	<u>7.4</u>	<u>9.0</u>
Soil Reaction (0.1M CaCl <sub>2</sub> ):	<u>--</u>	<u>--</u>
Available Water Capacity (inches):	<u>0 (low)</u>	<u>2 (moderate)</u>
Calcium Carbonate Equivalent (percent):	<u>--</u>	<u>--</u>

## PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 Narrative Label: HCPC

Plant Community Narrative:

This is an open site characterized by perennial bunchgrasses, scattered shrubs, and half-shrubs. Blue grama, sideoats grama, and galleta are significant warm-season species, while New Mexico feathergrass, western wheatgrass, and bottlebrush squirreltail are the most frequently encountered cool-season species. Widely scattered patches of wolfberry, Apache Plume, or fourwing saltbush are common. Various species of forbs occur and are evenly distributed.

Ground Cover (Average Percent of Surface Area).

Grasses & Forbs	22
Bare ground	24
Surface gravel	35
Surface cobble and stone	5
Litter (percent)	14
Litter (average depth in cm.)	2
Surface Gravel (% cover)	

Plant Community Annual Production (by plant type):

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	298	521	744
Forb	28	49	70
Tree/Shrub/Vine	28	49	70
Lichen	--	--	--
Moss	--	--	--
Microbiotic Crusts	--	--	--
Totals	354	619	884

Plant Community Composition and Group Annual Production:

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	BOGR2	Blue grama	184-215	184-215
2	BOCU	Sideoats grama	61-92	61-92
3	HENE5 HECO 26 PASM	NM Feathergrass Needle and Thread Western wheatgrass	61-92	61-92
4	PLJA	Galleta	31-61	31-61
5	ELEL5 ACHY	Bottlebrush squirreltail Indian ricegrass	31-61	31-61
6	MUWR LYPH	Spike muhly Wolftail	31-92	31-92
7	ARIST MUTO2 SPCR	Threeawns Ring muhly Sand dropseed	6-31	6-31
8	BOER4 BOHI2	Black grama Hairy grama	0-18	0-18

Plant Type - Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
9	FAPA LYCIU ATCA2	Apacheplume Wolfberry Fourwing saltbush	6-31	6-31
10	KRLA2	Winterfat	6-18	6-18
11	GUSA2 TECA2 ERNAN5 ARBI3 ARFR4	Broom snakeweed Spineless horsebrush Rubber rabbitbrush Bigelow sagebrush Fringed sagewort	6-18	6-18
12	PIED JUNIP	Pinyon Juniper	0-18	0-18



Plant Type – Forb

13	2FP	Perennial forbs	6-43	6-43
14	2FA	Annual forbs	6-18	6-18

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Growth Curves

Growth Curve ID NM 0308

Growth Curve Name: HCPC

Growth Curve Description: WP-2

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	5	7	10	15	25	25	8	5	0	0

## ECOLOGICAL SITE INTERPRETATIONS

### Animal Community:

This range site provides habitats which support a resident animal community that is characterized by pronghorn antelope, coyote, black-tailed jackrabbit, Merriam's kangaroo rat, white-throated woodrat, silky pocket mouse, sparrow hawk, chipping sparrow, mourning dove, leopard lizard, short-horned lizard, and prairie rattlesnake.

The chestnut-collard longspur winters on this site, and the common raven and prairie falcon hunt over it.

### Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations	
Soil Series	Hydrologic Group
Ceniza	B

#### Recreational Uses:

This site offers fair to good potential for hiking, horseback riding, nature observation, photography, camping, and picnicking. It offers good to excellent potential for pronghorn antelope hunting.

#### Wood Products:

This site has little significant value for wood products.

#### Other Products:

This site is suitable for grazing by most kinds and classes of livestock in all seasons of the year, although it is more suited to grazing animals (cattle or sheep) than browsers (goats). Continuous year- long grazing by cattle will ordinarily result in a decrease in such species as New Mexico feathergrass, needle-and-thread, western wheatgrass, and bottlebrush squirreltail. Prolonged heavy use will also cause a decline of sideoats grama, winterfat and spike muhly. Blue grama may initially increase to the point that occupies 75 to 80 percent of the species composition. The site, at this point, will also be characterized by increases in ring muhly, threeawns, rabbitbrush, and possibly pinyon and juniper. Production in these instances may be cut substantially.

Other Information:	
Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month	
Similarity Index	Ac/AUM
100 - 76	3.5 - 4.6
75 – 51	4.4 - 6.6
50 – 26	6.4 - 11.0
25 – 0	11.0 +

### Plant Preference by Animal Kind:

	Code	Species Preference	Code
Stems	S	None Selected	N/S
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruit/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

Animal Kind: Livestock

Animal Type: Cattle

[illegible]

## **Supporting Information**

### {PRIVATE}Associated Sites:

<u>{PRIVATE}Site Name</u>	<u>Site ID</u>	<u>Site Narrative</u>
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### Similar Sites:

<u>{PRIVATE}Site Name</u>	<u>Site ID</u>	<u>Site Narrative</u>
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### State Correlation:

This site has been correlated with the following states:

### Inventory Data References:

<u>{PRIVATE}Data Source</u>	<u>Number of Records</u>	<u>Sample Period</u>	<u>State</u>	<u>County</u>
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### Type Locality:

### Relationship to Other Established Classifications:

### Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the New Mexico and Arizona Plateaus & Mesas Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: McKinley, Catron, Cibola, Socorro and Sandoval.

### Characteristic Soils Are:

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### Other Soils included are:

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### Site Description Approval:

<u>{PRIVATE}Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Don Sylvester	02/15/80	Don Sylvester	02/15/80

### Site Description Revision:

<u>{PRIVATE}Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Brenda Simpson	08/20/02	George Chavez	12/16/02

